

4.0 SECTION 4(F) EVALUATION

4.1 Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that “the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f).

Use is defined in 23 CFR 771.135(p) as follows:

Use occurs when:

- i. The property is permanently incorporated into a transportation facility,
- ii. There is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purposed as determined by the criteria in paragraph (p)(7) of this section; or
- iii. There is a constructive use of land.

Constructive Use occurs when the transportation project does not incorporate land from a section 4(f) resource, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under section 4(f) are substantially impaired. Substantial impairment occurs when the protected activities, features or attributes of the resource are substantially diminished.

In August of 2005, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) was enacted as Public Law 109-59. Section 6009(a) of SAFETEA-LU amended existing Section 4(f) legislation to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f).

A *de minimis* use is defined as follows in the Guidance for Determining *De Minimis* Impacts to Section 4(f) Resources (FHWA/FTA, December 13, 2005):

A finding of *de minimis* impact on a historic site may be made when:

1. The process required by Section 106 of the National Historic Preservation Act (NHPA) results in the determination of “no adverse effect” or “no historic properties affected” with the concurrence of the SHPO...;
2. The SHPO ..., is informed of FHWA’s or FTA’s intent to make a *de minimis* impact finding based on their written concurrence in the Section 106 determination; and
3. FHWA or FTA has considered the views of any consulting parties participating in the Section 106 consultation.

A finding of *de minimis* impact on a park, recreation area, or wildlife and waterfowl refuge may be determined when:

1. The transportation use of the Section 4(f) resource, including consideration of impact avoidance, minimization, and mitigation or enhancement measures, does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f)
2. The Secretary has determined, after public notice and opportunity for public review and comment, that the transportation program or project will not adversely affect the activities, features, and attributes of the park, recreation area, or waterfowl refuge eligible for protection under this section; and
3. The finding of the Secretary has received concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge.

SAFETEA-LU requires concurrence by the official with jurisdiction and notice to the public that FHWA is contemplating a *de minimis* finding for the use of a park. The public must also be notified of *de minimis* impacts when the draft environmental document is released for public comment. This notification must be made separately and explicitly.

4.2 Description of Proposed Action

Improvements to the SR-212/Telegraph Street corridor are intended to accommodate existing and projected traffic. Proposed improvements include widening to a five-lane section with four travel lanes and a median; this configuration would match the rest of the corridor beyond the project limits. The Mill Creek Bridge would be replaced to accommodate the same typical section. Sidewalks and parkstrips would also be provided for pedestrians. Other opportunities for corridor beautification, in addition to parkstrips,

have been identified by Washington City; such measures would be accommodated to the extent practicable in the proposed action.

The purpose of the proposed action is to improve safety, relieve traffic congestion/increase capacity, and enhance the community. Outside the project study area limits (500 West to 300 East), Telegraph Street has roadway sections built-out to accommodate future traffic volumes, thereby providing logical termini for the proposed action. To satisfy current and expected functional needs for this segment of Telegraph Street and meet future needs determined by Utah Department of Transportation (UDOT) traffic projections, a facility that can convey projected traffic volumes of 29,000 vehicles per day (vpd) is required. Further details concerning the Purpose and Need are presented in Chapter One: Sections 1.3 and 1.4.

4.2.1 Description of Build Alternatives

Four Build Alternatives were initially screened and evaluated for the purpose of NEPA compliance. The results of the screening process are described in detail in Chapter Two. Three of the Build Alternatives (some with options) were advanced for further evaluation in this Environmental Assessment (EA). Those alternatives are summarized below. For a detailed description of the Build Alternatives please refer to Chapter 2.

4.2.1.1 Alternative One

To improve the corridor's continuity Telegraph Street between 500 West and 300 East would be widened to a 95-foot ROW section. From 500 West to 200 West, the widening of the road would be symmetrical about the current road centerline. From 200 West to Main Street the road would be shifted to the north by 29 feet to minimize impacts to historic properties on the south side of the street, and then from Main Street to 300 East the road would be shifted 29 feet to the south, to minimize impacts to historic properties on the north side of the street. The bridge would need to be replaced and thus could not be avoided in the construction process. The Bridge needs to be replaced in order for it to meet current design standards for safety.

Alternative One – Narrow Option

This option to Alternative One would shift the roadway to the north and south the same as Alternative One, but the width of the road would be decreased to 85 feet. By making this alternative less wide one additional 4(f) resource is avoided. Also, the bridge would need to be replaced and thus could not be avoided in the construction process. The Bridge needs to be replaced in order for it to meet current design standards for safety.

4.2.1.2 Alternative Two

Alternative Two calls for widening and improvements to Telegraph Street from 500 West to 300 East. The corridor would be widened to a 95-foot ROW section including a 1-foot easement on each side of the ROW. From 500 West to 200 West, the radius of the curve would be increased. The increased radius would shift the roadway to the south by a

maximum of 12 feet from the centerline of the current road. From 200 West to 300 East, the roadway would be shifted to the north by 29 feet from the current centerline.

Alternative Two is similar to Alternative One in that there are roadway shifts that were developed in order to avoid Section 4(f) resources. From 500 West to 200 West the roadway would be shifted 12 feet to the south, from 200 West to 300 East, the roadway would be shifted 29 feet to the north, to avoid 4(f) resources to the south. These design shifts would still cause the full use of three Section 4(f) properties. This alternative avoids one of the 4(f) resources that would be impacted by Alternative One, but then impacts a different property than Alternative One does because of the alignment shifts. The bridge would need to be replaced and thus could not be avoided in the construction process. The Bridge needs to be replaced in order for it to meet current design standards for safety.

Alternative Two – Narrow Option

This alternative would shift the roadway in the same areas as Alternative Two, but the width of the road would be decreased to 85 feet in an attempt to avoid the 4(f) resources impacted by a full use in Alternative Two. The narrow width does make it so that one additional resource is avoided; however, there would still be two full use impacts to Section 4(f) properties. The bridge would need to be replaced and thus could not be avoided in the construction process. The Bridge needs to be replaced in order for it to meet current design standards for safety.

4.2.1.3 Alternative 3 – Narrow (Preferred Alternative)

Alternative Three – Narrow (Preferred Alternative) combines features of Alternative One – Narrow and Alternative Two – Narrow. This alternative was designed to avoid as many 4(f) resources as possible along Telegraph Street. This alternative does require the full use of one 4(f) resource, the Mill Creek Bridge. None of the Build alternatives developed along Telegraph Street avoid the use of the Bridge.

4.3 Section 4(f) Properties

Section 4(f) properties within the project study area include existing parks, trails, and historic properties that would be subject to a Section 4(f) use from any of the Build alternatives. The following sections describe the historic and recreation properties that meet Section 4(f) criteria.

4.3.1 Historic Properties

Residence (65 West Telegraph Street)

This structure is a single-story, Classical/Vernacular and Colonial Revival residence of an unclear floor plan. It was constructed in 1880. It is clad in modern synthetic stucco, and alterations include multiple additions to the rear and possibly one side. On the whole, this building is a fair example of the Classical/Vernacular and Colonial Revival styles

and is therefore assigned a State Historic Preservation Office (SHPO) rating of B. It retains sufficient integrity to be representative of the history of Washington City and is therefore eligible under Criterion A.

Relief Society (97 West Telegraph Street)

This building is a single-story, Vernacular Greek Revival center-crosswing structure. It was constructed in 1872, probably of adobe bricks, but is now clad in stucco veneer. Alterations include additions constructed around 1904. A local landmark plaque notes that the building served as the ZCMI Co-op from 1872-1875. On the whole, this building is a good example of the Greek Revival style; it is therefore assigned a SHPO rating of A and is listed in the National Register of Historic Places (NRHP).

Service Center (214 West Telegraph Street)

This structure is a single-story service bay/business building exhibiting general Post-World War II styling. It was constructed in 1955, probably of concrete block, but is now clad in stucco. Alterations include the stucco veneer and the use of modern commercial windows and awnings. On the whole, this building is a fair example of the Post-World War II style and is therefore assigned a SHPO rating of B. It does not retain sufficient integrity to be considered individually eligible for the NRHP under Criterion C. It does, however, retain sufficient integrity to be representative of the history of Washington City and is therefore eligible under Criterion A.

Mill Creek Bridge (375 West Telegraph Street)

The Washington Street highway bridge (UDOT Structure No. OD 416) spans Mill Creek at approximately 375 West Telegraph Road. The bridge was constructed in 1937 by the L.A. Young Construction Company pursuant to a Utah State Road Commission design (Fraserdesign, 1989). It is a skewed, concrete T-beam structure with concrete guardrails decorated with pointed cutouts. The bridge deck rests upon tall concrete piers exhibiting Art Moderne design characteristics, a somewhat unique stylistic element on extant bridges of this period in Utah. The bridge is in good condition and has had no substantive modification since its construction. Accordingly, the Mill Creek Bridge meets the minimum standards of age and integrity to be eligible for the NRHP under Criterion C as a good representative example of a 1930s-era Art Moderne highway bridge.

Star Nursery (385 West Telegraph Street)

This two-and-one-half story, sandstone, Classical style industrial building is rectangular in plan, has a front-gabled roof, and was built in 1866. It was originally constructed and operated as the Washington Cotton Factory. There have been two compatible additions, and it was converted to a nursery in 1998. On the whole, this building is a good example of the Classical style and is therefore assigned a SHPO rating of A and is listed in the NRHP.

Washington History Museum (11 East Telegraph Street)

This structure is a two-story, Victorian Eclectic school-block constructed of local sandstone. It was originally constructed in 1906. Alterations include a 1922 gym

addition attached to the rear of the schoolhouse. On the whole, this building is a good example of the style and is therefore assigned a SHPO rating of A and is listed in the NRHP. The Museum is owned and operated by Washington City.

Residence (82 East Telegraph Street)

This building is a one-and-one-half story Bungalow residence exhibiting general early 20th Century and Arts-and-Crafts style elements. It was constructed in 1910 of regular brick with shingle siding on the gable ends. The original windows are still intact. Contributing historical landscape features (a rock wall and ditch) are present on the property. Because this building is a good example of the Bungalow style, it was assigned a SHPO rating of A and is considered eligible for the NRHP under Criterion C.

Commercial (95 East Telegraph Street)

This building is a single-story Hall-Parlor residence exhibiting early 20th Century and general Victorian styles. It was constructed in 1900 and is clad in modern synthetic stucco and has an in-period rear addition. The building is currently used for commercial purposes. The building is owned and maintained by Washington City and leased or rented to private business. On the whole, this building is a fair example of early 20th Century and general Victorian styles and is therefore assigned a SHPO rating of B. It does not retain sufficient integrity to be considered individually eligible for the NRHP under Criterion C. It does, however, retain sufficient integrity to be representative of the history of Washington City and is therefore eligible under Criterion A.

Residence (8 North 300 West)

This building is a two-story, Vernacular Greek Revival Temple Form residence constructed of local sandstone. It was built in 1870 and appears to have been recently restored using modern materials. Other than the use of modern windows, roofing, and wood railings, the building has seen no substantial out-of-period modifications. On the whole, this building is a fair example of the Vernacular Greek Revival Temple Form style and is therefore assigned a SHPO rating of B. It retains sufficient integrity to be representative of the history of Washington City and is therefore eligible under Criterion A.

4.3.2 Recreation Properties

Nisson Park (150 West Telegraph Street)

Nisson Park is located on Telegraph Street between Mill Creek and 200 West and between Telegraph Street and 100 South. The park covers 4 acres and includes a covered pavilion, playground area, basketball hoops, and shaded walking path with picnic tables, restrooms, and large playing field. The park, which opened in May of 1999, is owned and managed by the Washington City Parks and Recreation Department.

Mill Creek Trail (Mill Creek)

The Mill Creek trail passes under Telegraph Street and provides a pedestrian link between the northern and southern parts of the City. It provides important access to parks and open spaces, including the Habitat Conservation Area to the north and the Virgin

River Trail corridor to the south. The trail is owned and managed by the Washington City Parks and Recreation Department.

Veteran's Park (50 East Telegraph Street)

Veteran's Park is located at 50 East Telegraph Street, within the Historic Downtown, and is approximately 4 acres in size. It has large shade trees, covered pavilion, playground area, restrooms, and large playing field. Many of the City-sponsored sports activities take place in this park. The park is owned and managed by the Washington City Parks and Recreation Department.

4.4 Impacts to Section 4(f) Properties

As discussed earlier (**Section 4.1**), there are several types of use of a property that can be considered a 4(f) Use. None of the Build Alternatives discussed in this evaluation will have a constructive 4(f) use or a temporary adverse 4(f) use. The only uses that will be discussed within this evaluation will be full use and *de minimis* use. For purposes of this document, permanent use will be defined as the total acquisition (full use) of the resource for transportation purposes.

4.4.1 Full Use Section 4(f) Impacts

The extent of impacts to historic properties varies depending on the Build alternative being considered. One of the screening criteria used to select alternatives carried forward for further analysis in this EA was the number of impacts to historic properties that would result in an adverse effect or a full use under Section 4(f). **Table 4.1** shows the properties that would be subject to a Section 4(f) full use under the Build alternatives. The following sections summarize Section 4(f) full use impacts by alternative.

Table 4.1 Full Use Impacts to Historic Properties by Alternative

Address	Build Alternative				
	One	One – Narrow	Two	Two-Narrow	Three-Narrow (Preferred Alternative)
Service Center (214 W. Telegraph)	X	X	X		
Mill Creek Bridge (375 W. Telegraph)	X	X	X	X	X
Residence (82 E. Telegraph)	X				
Commercial (95 E. Telegraph)			X	X	
X = Section 4(f) Full Use					

Source: URS 2006

4.4.1.1 Alternative One

Alternative One results in a full use of three Section 4(f) resources. Those resources include the Mill Creek Bridge, the Service Center at 214 West Telegraph Street and the residence at 82 East Telegraph Street.

Alternative One – Narrow

Alternative One-Narrow was a design shift developed to reduce the number of 4(f) resources impacted by a full use. The alternative does reduce the number of full uses by one, which results in a full use of two Section 4(f) resources. Those resources include the Mill Creek Bridge and the Service Center at 214 West Telegraph Street.

4.4.1.2 Alternative Two

Alternative Two would result in a full use of three Section 4(f) resources. One of these resources is the Mill Creek Bridge. The other resources are the Service Center at 214 West and commercial building at 95 East Telegraph Street.

Alternative Two – Narrow

As with Alternative One – Narrow, Alternative Two-Narrow was developed in an attempt to avoid full uses of 4(f) resources. This design shift results in a full use of two Section 4(f) resources. One of those resources is the Mill Creek Bridge; the other is the commercial building at 95 East Telegraph Street.

4.4.1.3 Alternative Three – Narrow (Preferred Alternative)

This alternative was developed to avoid the full use of as many 4(f) resources within the project area as was possible. Because the Mill Creek Bridge would need to be replaced by any transportation alternative, along Telegraph Street, that meets the Purpose and Need of this project it can not be avoided by any of the Build Alternatives.

Alternative Three – Narrow (Preferred Alternative) would result in the least overall harm to the 4(f) resources along Telegraph Street between 500 West and 300 East.

Please refer to **Appendix E** for a Programmatic 4(f) Evaluation of the Mill Creek Bridge. This document discusses why there is not a prudent or feasible alternative to the use of the Mill Creek Bridge. In summary, there is no prudent or feasible alternative to avoiding the use of the Mill Creek Bridge because the No Build alternative would not meet the projects Purpose and Need, the Avoidance alternatives would cause adverse social, economic, or environmental effects, and preserving the current bridge in place is not prudent or feasible because the Mill Creek Bridge has been characterized as beyond rehabilitation for transportation use. Please refer to **Appendix E** for a more in depth discussion of these alternatives.

4.4.2 De Minimis Use Section 4(f) Impacts

Each of the Build alternatives affects parks, trails, and historic buildings with minor ROW acquisitions of differing amounts. The purpose of ROW acquisition on these

properties is to widen the roadway to a four-lane road with a center turn lane or raised median and to build sidewalks and park strips. It is not possible to avoid these acquisitions under the Build alternatives because the safety and functionality of the road and sidewalks would be decreased in these areas if the width is not increased.

Washington City and SHPO have concurred with the findings of effect and have been notified of the Federal Highway Administration (FHWA) determination that the project will have a *de minimis* impact on certain Section 4(f) parks, trails, and historic properties. **Table 4.2** summarizes the properties affected by *de minimis* ROW acquisitions under each Build alternative in terms of the acres impacted.

The determination that the proposed action would have *de minimis* impacts to historic properties under each of the Build alternatives concludes the Section 4(f) evaluation of the Build alternatives.

Table 4.2 *De Minimis* Impacts (Acres) to Parks, Recreation Areas, and Historic Properties by Alternative

Address	Build Alternative (acres impacted)				
	One	One – Narrow	Two	Two-Narrow	Three-Narrow (Preferred Alternative)
Historic Properties					
Star Nursery (385 W. Telegraph)	0.11	0.07	0.18	0.14	0.18
Residence (8 N.300 W.)	0.06	0.05	0.04	0.02	0.03
Service Center (214 W. Telegraph)	0.00	0.00	0.00	0.07	0.07
Relief Society (97 W. Telegraph)	0.007	0.001	0.006	0.00	0.006
Residence (65 W. Telegraph)	0.01	0.02	0.006	0.00	0.001
Museum (11 E. Telegraph)	0.05	0.07	0.14	0.11	0.02
Residence (82 E. Telegraph)	0.00	0.00	0.01	0.00	0.07
Commercial (95 E. Telegraph)	0.04	0.01	0.00	0.00	0.004
Recreational Properties					
Nisson Park (150 W. Telegraph)	0.02	0.00	0.11	0.07	0.11

Address	Build Alternative (acres impacted)				
	One	One – Narrow	Two	Two- Narrow	Three- Narrow (Preferred Alternative)
Veteran’s Park (50 E. Telegraph)	0.04	0.01	0.00	0.00	0.011
Mill Creek Trail (Mill Creek)	0.18	0.15	0.18	0.15	0.15

Source: URS 2006

4.5 Avoidance Alternatives

4.5.1 Standards and Methodology

Section 4(f) regulations require an evaluation to determine if there are any feasible and prudent alternatives that could avoid impacts to Section 4(f) properties. An alternative may be rejected as infeasible if it is not technically possible to design and build. As defined in FHWA regulations: “An alternative may be rejected as imprudent for any of the following reasons:

- The alternative does not meet the project purpose and need,
- The alternative involves extraordinary operational or safety problems,
- There are unique problems or truly unusual factors present with the alternative,
- The alternative would result in unacceptable and severe adverse social, economic or other environmental impacts,
- The alternative would cause extraordinary community disruption,
- The alternative has additional construction costs of an extraordinary magnitude, or
- There is an accumulation of factors that collectively, rather than individually, have adverse impacts that present unique problems or reach extraordinary magnitudes”

According to FHWA guidance documents, “If all alternatives use land from 4(f) resources, then an analysis must be performed to determine which alternative results in the least overall harm to the 4(f) resources. It should be noted that the net harm analysis is governed by all the possible mitigation that could be done to minimize harm to the 4(f) resources. The net harm should be determined in consultation with the agency having jurisdiction over the resource, in the case of historic sites, the SHPO or Tribal Historic Preservation Officer, as appropriate. The alternative that results in the least net harm must be selected.” (FHWA Section 4(f) Policy Paper, March 2005)

4.5.2 Avoidance Evaluation

In order to demonstrate that there is no feasible or prudent alternative to using or impacting a Section 4(f) property, avoidance alternatives were identified and evaluated for each affected property. FHWA Technical Advisory 6640.8A (October 1987) states that “Generally, this would include alternatives to either side of the property.” “The design alternatives should be in the immediate area of the property and consider minor alignment shifts, a reduced facility, retaining structures, etc. individually or in combination, as appropriate.” The Section 4(f) Policy Paper further states that “. . . the evaluation must address both location alternatives and design shifts that totally avoid the 4(f) land.” The evaluation must also address the purpose and need of the project, and “Any alternative that is determined to not meet the need of the project, including the no-build alternative, is not a feasible and prudent alternative.” (FHWA Section 4(f) Policy Paper, March 2005)

Based on the guidance provided by FHWA regulations and guidelines, this evaluation will address the following three types of avoidance alternatives:

- Do Nothing
- Location Alternatives
- Design Shift

This avoidance evaluation also includes the preparation of a Nationwide Programmatic 4(f) Evaluation and Approval for the Mill Creek Bridge. Please refer to **Appendix E** for the complete Programmatic Evaluation and supporting documentation.

4.5.2.1 Do Nothing

4.5.2.2 No Build Alternative

Under the No Build alternative, Telegraph Street between 500 West and 300 East would remain in its current condition. Standard maintenance would still occur, but there would be no additional improvements through widening or community enhancements. The discontinuity between segments of Telegraph Street from I-15 through Washington City would continue under current conditions. Service levels at most intersections would decline to LOS F by the year 2030. The sidewalk width would remain between 4 and 5 feet. The Mill Creek Bridge would not be redesigned or rebuilt to comply with current AASHTO standards and would remain “functionally obsolete”.

The No Build alternative does not address safety issues arising from inconsistent lane configurations, poor sight distance, shoulder width inconsistencies, intersection sight distance, pedestrian accommodations, and bridge deficiencies. Pedestrian and traffic safety would likely decline as congestion increased. Accordingly, the No Build alternative does not meet the project Purpose and Need and, therefore, is not a feasible and prudent alternative for avoidance of Section 4(f) impacts.

4.5.2.3 Location Alternatives

Three alternatives in new locations were evaluated that would preserve existing 4(f) properties along Telegraph Street within the project study area. **Figure 4.1** shows the general location of the avoidance alternatives.

100 North Alternative

This alternative would re-route traffic to 100 North. Improvements would include a new or improved roadway from 500 West to 300 East, new roadway from 500 West to Mill Creek, and a new bridge over Mill Creek. 100 North is not currently a through street. City Hall currently occupies the block between Main Street and 100 East; the building would need to be relocated in order to complete the improvements through this area. This alternative would require additional roadway improvements along 500 West and 300 East in order to divert traffic to and from Telegraph Street. The existing bridge over Mill Creek on Telegraph Street would be maintained for alternate non-vehicle traffic uses.

Following is a list of potential impacts resulting from the 100 North alternative:

- Improvements would occur in a well established older neighborhood.
- The neighborhoods likely contain historic residences that would be impacted by construction.
- Some residences would likely be involved in full acquisitions.
- A mobile home park located on the west side of Mill Creek would likely be adversely affected by required relocation of some units.
- A new bridge crossing could permanently impact wetland and wetland habitat.
- Routing traffic off of Telegraph Street could have a significant economical impact to the businesses located between 500 West and 300 East.

The 100 North alternative would likely cause significant community disruption because the area is currently a residential neighborhood served by a two lane road. The wider road and increased traffic could lead to significant safety problems because of its location in a neighborhood that does not currently support a major thoroughfare. The alternative would also result in impacts to the wetland and other habitat along Mill Creek. Based on these potential impacts the 100 North Alternative is not feasible or prudent for the avoidance of Section 4(f) impacts.

100 South Alternative

This alternative would include re-route traffic to 100 South. Widening and other improvements would be required from 500 West to 300 East and include a new bridge crossing over Mill Creek. This alternative is similar to Alternative Four discussed in Chapter 2, but eliminated from further discussion. 100 South is currently a through street from 200 West to 300 East. New road would need to be constructed from 500 West to

Mill Creek, where a new bridge would be constructed. The existing roadway would need to be upgraded and widened to accommodate current and future traffic levels. The existing bridge at Telegraph and Mill Creek would be maintained for alternate non-vehicle traffic uses.

Following is a list of potential impacts resulting from the 100 South alternative:

- Many residences on 100 South are considered eligible for listing on the NRHP.
- These residences would likely need to be relocated because the road would be widened to a four lanes with a center turn lane or median.
- A new bridge crossing could permanently impact the wetland and wetland habitat in Mill Creek.
- Routing traffic off of Telegraph Street could have a significant economic impact to the businesses located between 500 West and 300 East.
- With several residences along 100 South, any new construction or roadway widening would likely cause significant community disruption.

The 100 South alternative would likely cause significant community disruption because the area is currently a residential neighborhood served by a two lane road. The wider road and increased traffic could lead to significant safety problems because of its location in a neighborhood that does not currently support a major thoroughfare. The alternative would also result in impacts to the wetland and other habitat along Mill Creek. Based on these potential impacts the 100 South Alternative is not feasible or prudent for the avoidance of Section 4(f) impacts.

200 South Alternative

This alternative would include improvements to 200 South from 500 West to 300 East in order to divert traffic to and from the existing Telegraph Street alignment outside of this project area. It would also include a new bridge over Mill Creek. 200 South is currently a through street from 500 West to 300 East. There is an existing culvert crossing of Mill Creek, which would need to be upgraded or replaced to accommodate current and future traffic levels. The roadway would also need to be widened to four lanes from 500 West to 300 East in order to accommodate current and future traffic levels. This alternative would require additional roadway improvements along 500 West and 300 East. The existing bridge would be maintained for alternate non-vehicle traffic uses.

Like the 100 North and 100 South alternatives, improvements to 200 South would occur in older neighborhoods containing historic residences that could be impacted by construction. Some residences would likely require complete acquisition or relocation in order to complete the project.

A new or upgraded crossing of Mill Creek could cause adverse impacts to the wetlands along Mill Creek. The wetlands would likely be permanently damaged in this area from

the construction of a new bridge or the widening of the existing culvert. Further, the damage to the wetland could have an adverse impact to threatened and endangered species that may use the wetland habitat in this area.

The 200 South alternative would likely cause significant community disruption because the area is currently a neighborhood served by a two lane road. The wider road and increased traffic could lead to significant safety problems in a neighborhood that does not currently support a major thoroughfare. Based on these potential impacts the 200 South Alternative is not feasible or prudent for the avoidance of Section 4(f) impacts.

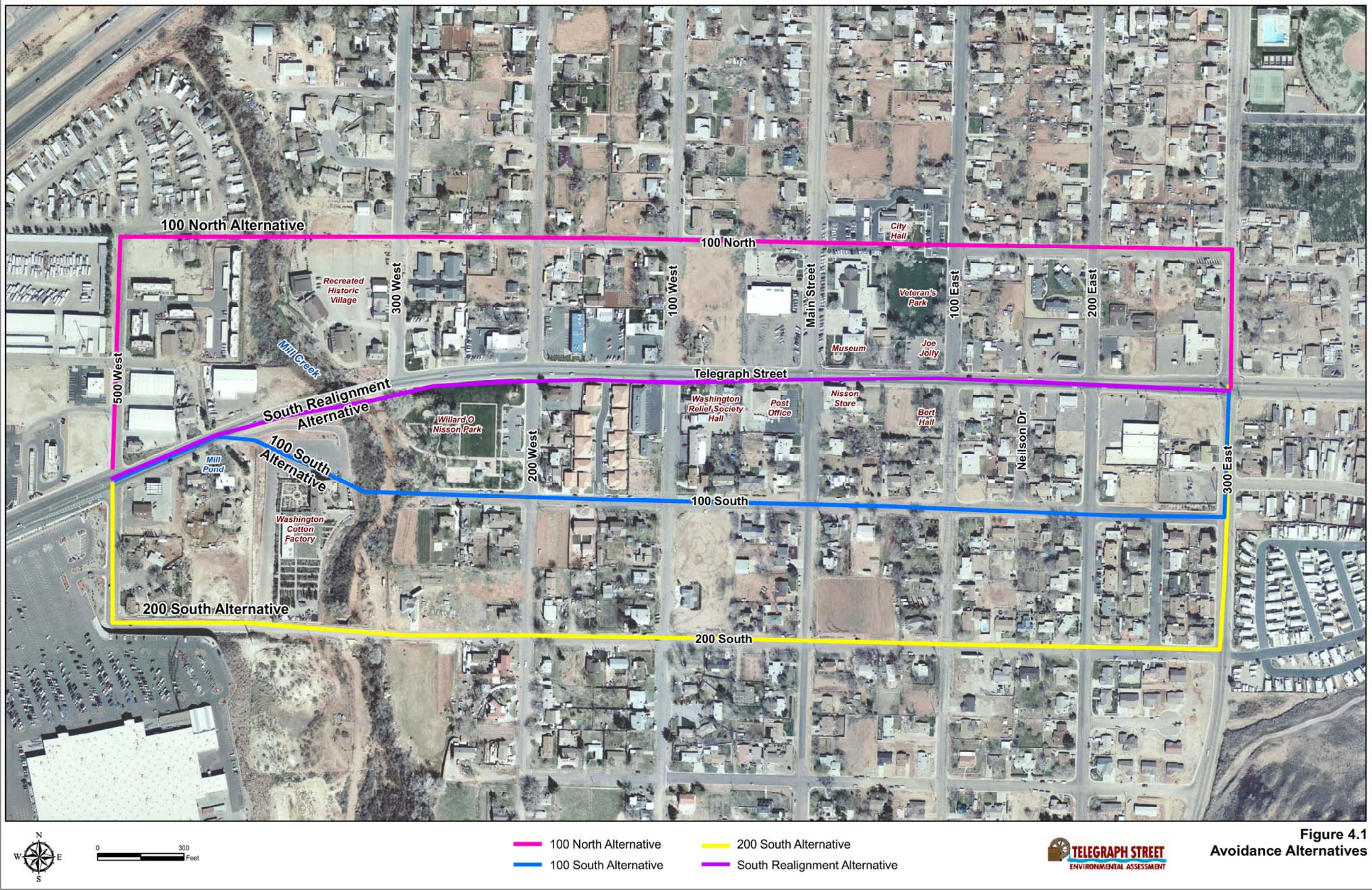
4.5.2.4 Design Shift

All of the current Build Alternatives involve design shifts in response to Section 4(f) resources. Impacts of the Build Alternatives to Section 4(f) resources were evaluated in **Section 4.4**. The following section evaluates an additional avoidance alternative that employs a design shift. Refer to **Figure 4.1** for an overview of the alternative.

South Realignment Alternative

This alternative would shift the alignment of Telegraph Street, and the new Mill Creek Bridge, to the south in order to preserve the existing bridge for pedestrian or other alternative uses. To achieve this, the horizontal curve radius of the improved Telegraph Street as it crosses Mill Creek would need to be increased from 3,725 feet to 6,200 feet. The increased radius, in turn, would shift the location of tie-in points to the existing alignment further away at both ends of the new horizontal curve (520 feet further west and 750 feet further East). The length of the new Mill Creek Bridge would be 140 feet. The typical roadway cross-section would be the same as Alternative Three-Narrow, the preferred alternative.

This alternative is also evaluated in the Programmatic Section 4(f) Evaluation of the Mill Creek Bridge (**Appendix E**). This alternative was developed in an attempt to avoid all Section 4(f) resources along Telegraph Street including the historic bridge, while maintaining the general alignment of the existing Telegraph Street.



When compared to Alternative Three – Narrow (Preferred Alternative), the South Realignment alternative would have the following additional potential adverse impacts:

- Relocation of the convenient store/gas station located at 471 West Telegraph Street.
- Reduction in parking stalls for the nursery/old cotton mill located at 385 West Telegraph Street.
- An additional 0.02 acres of Mill Creek wetlands permanently removed.
- An additional 55 feet of Nisson Park adjacent to Telegraph Street required for ROW acquisition.
- Relocation of the professional office building located at 195 West Telegraph Street.
- Relocation of two duplex residences located at 150 West Telegraph Street.
- An additional 5 feet of the Historic Relief Society Hall property (97 West Telegraph Street) required for ROW acquisition.
- An additional 15 feet of Washington History Museum property (11 East Telegraph Street) required for ROW acquisition. Some existing statues would require relocation

The potential impacts identified above would also contribute to significantly higher costs for engineering, roadway and structures, and ROW acquisition when compared to the proposed improvements in Alternative Three – Narrow (Preferred Alternative). Based on these potential impacts the South Realignment alternative is not feasible or prudent for the avoidance of Section 4(f) impacts.

4.5.3 Conclusions

None of the Build alternatives for the SR-212/Telegraph Street project would avoid all Section 4(f) resources because they would ultimately result in a 4(f) use of the historic Mill Creek Bridge. It should be noted, however, that this is a preliminary analysis based on the existing plans for each of the Build alternatives and that these plans are subject to change. FHWA regulations provide a Programmatic Section 4(f) approval of the use of historic bridge structures that are to be replaced or rehabilitated, that are on or eligible for listing on the NHRP, and are not a National Historic Landmark. **Appendix E** contains the Programmatic Section 4(f) Evaluation and Approval and documentation for the use of the historic Mill Creek Bridge. All possible planning has been done to minimize harm to this Section 4(f) resource.

Based on evaluation of both the Build Alternatives and Section 4(f) alternatives, there are no feasible or prudent alternatives that would avoid impacts to Section 4(f) resources. The basis for this conclusion includes the following:

1. Avoidance of the Section 4(f) resource within the project area would require that Telegraph Street not be improved to four lanes with a center turn lane, leaving the roadway poorly equipped to handle traffic demands.

2. Building at a new location in order to avoid the 4(f) resources could cause greater impacts, including potential impacts to other Section 4(f) resources and additional impacts to the wetlands along Mill Creek. These alternatives would also cause extraordinary disruptions in the neighborhood communities and may create new safety hazards.
3. Most of the design shifts do not avoid all of the Section 4(f) properties because the historic Mill Creek Bridge would need to be replaced in the construction of all but one design shift. The bridge would need to be replaced and thus could not be avoided in the construction process
4. The bridge needs to be replaced in order for it to meet current design standards for traffic and safety.

In accordance with FHWA regulations and guidelines and the findings of the analyses of the avoidance alternatives above, Alternative Three – Narrow (Preferred Alternative) has the least net harm to Section 4(f) resources.

4.6 Measures to Minimize Harm to Section 4(f) Properties

The public will be adequately notified prior to any changes in access to any of the affected recreational facilities. Measures will be taken to minimize the noise or temporary closures due to construction activities. Mitigation commitments for the impacts of the Build alternatives have been determined in consultation with SHPO, Utah Heritage Foundation (UHF), Washington City, Washington City Historical Society (WCHS), and other interested parties. Those mitigation commitments are described in a Memorandum of Agreement (MOA) that is signed by the FHWA, SHPO, and UDOT. The MOA is included in **Appendix D**.

Mitigation measures include:

- Preparing an Intensive Level Survey (ILS) for the Mill Creek Bridge.
- Photographing the bridge to document the general arrangement and exterior details.
- Preparing and submitting one complete set of engineering drawings (as-built plans), if available. A copy of the proposed roadway and bridge cross sections will also be submitted.
- Designing the bridge aesthetics to be consistent with the historic theme of the surrounding area.
- FHWA/UDOT Continuing consultation with SHPO and Washington City concerning bridge aesthetics and will also invite those parties to participate in preliminary aesthetic design discussions and review for the replacement bridge.
- Submitting all materials to the Utah Division of State History, Preservation Section, to be placed on file.

During construction, if any previously unknown cultural resources are encountered, construction will cease, and materials will be evaluated in accordance with UDOT Standard Specification 01355, Part 1.13, Discovery of Historical, Archaeological, or Paleontological Objects, Features, Sites, Human Remains, or Migratory Avian Species.

4.7 Coordination

FHWA has coordinated with agencies that have jurisdiction over the affected Section 4(f) resources. Those agencies included SHPO, Utah Heritage Foundation (UHF), Washington City, and Washington City Historical Society (WCHS). A letter has been sent to each of these agencies to explain the purpose of the Section 4(f) process and to inform the agency of the Section 4(f) resources under their jurisdiction. The letter identified Alternative Three – Narrow as the Preferred Alternative, described the types of impact on Section 4(f) properties, and proposed mitigation measures to minimize the degree of impact. In that letter, FHWA also requested concurrence from the agency regarding impacts to and proposed mitigation measures for the Section 4(f) properties. If an agency wanted to discuss these issues in more detail before concurring, FHWA has conducted follow-up meetings upon request from the agency. Copies of each concurrence letter are included in **Appendix F**. Further coordination with these agencies will continue throughout the formal design process and implementation of the proposed mitigation measures.

The parks and trail were not acquired or developed with funding from the Land and Water Conservation Funds Act. Therefore Section 6(f) coordination is not required.

4.8 Section 4(f) Determination

This section intentionally left blank in accordance with UDOT guidelines.